



National Green Building Certification

September 2009



National Green Building Certification

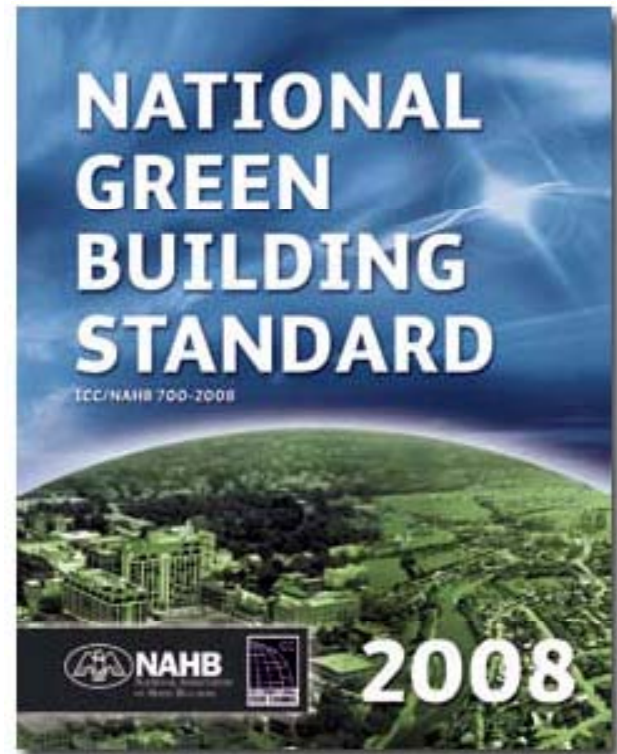
Overview

- National Green Building Standard
- Green Certification
- Green Approved Products
- NAHB Research Center



National Green Building Standard

- Approved Jan 2009
- Collaboration between ICC and NAHB
- First green rating system to be approved consensus standard





Key Elements

1. **ANSI-approved** consensus standard
2. Free web-based **Green Scoring Tool**
3. **Third-party verification** of all points claimed
4. Applies to **all residential** projects
5. Requires **progressively higher** levels of environmental performance in every category to obtain higher levels of green certification



National Green Building Standard

- Hallmarks of ANSI process include:
 - **consensus** by **balance of stakeholders**
 - **broad-based public review** and comment
 - **consideration of comments** submitted
 - incorporation of approved changes into standard
 - **right to appeal** for anyone who believes that due process was not respected



Lot Design

Energy
Efficiency

Indoor Air
Quality

Water
Efficiency

Operation &
Maintenance

Resource
Efficiency



National Green Building Certification

Performance Levels

Threshold Point Ratings for Green Buildings

Green Building Categories			Performance Level Points ^{(1) (2)}			
			BRONZE	SILVER	GOLD	EMERALD
1.	Chapter 5	Lot Design, Preparation, and Development	39	66	93	119
2.	Chapter 6	Resource Efficiency	45	79	113	146
3.	Chapter 7	Energy Efficiency	30	60	100	120
4.	Chapter 8	Water Efficiency	14	26	41	60
5.	Chapter 9	Indoor Environmental Quality	36	65	100	140
6.	Chapter 10	Operation, Maintenance, and Building Owner Education	8	10	11	12
7.		Additional Points from any category	50	100	100	100
Total Points:			222	406	558	697

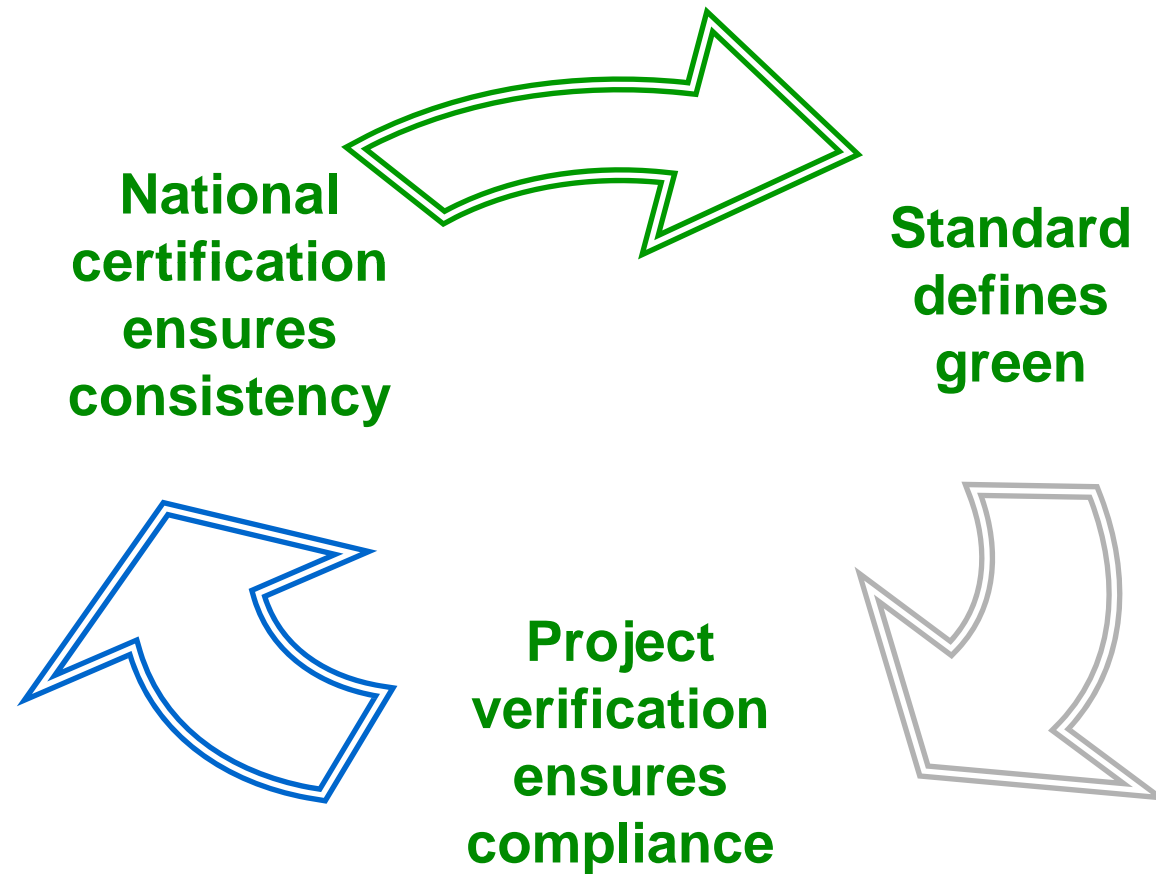
- (1) In addition to the threshold number of points in each category, all mandatory provisions of each category shall be implemented.
- (2) For dwelling units greater than 4,000 square feet (372 m²), the number of points in Category 7 (Additional Points from any category) shall be increased in accordance with Section 601.1. The "Total Points" shall be increased by the same number of points.

Green Rating Cost Comparisons

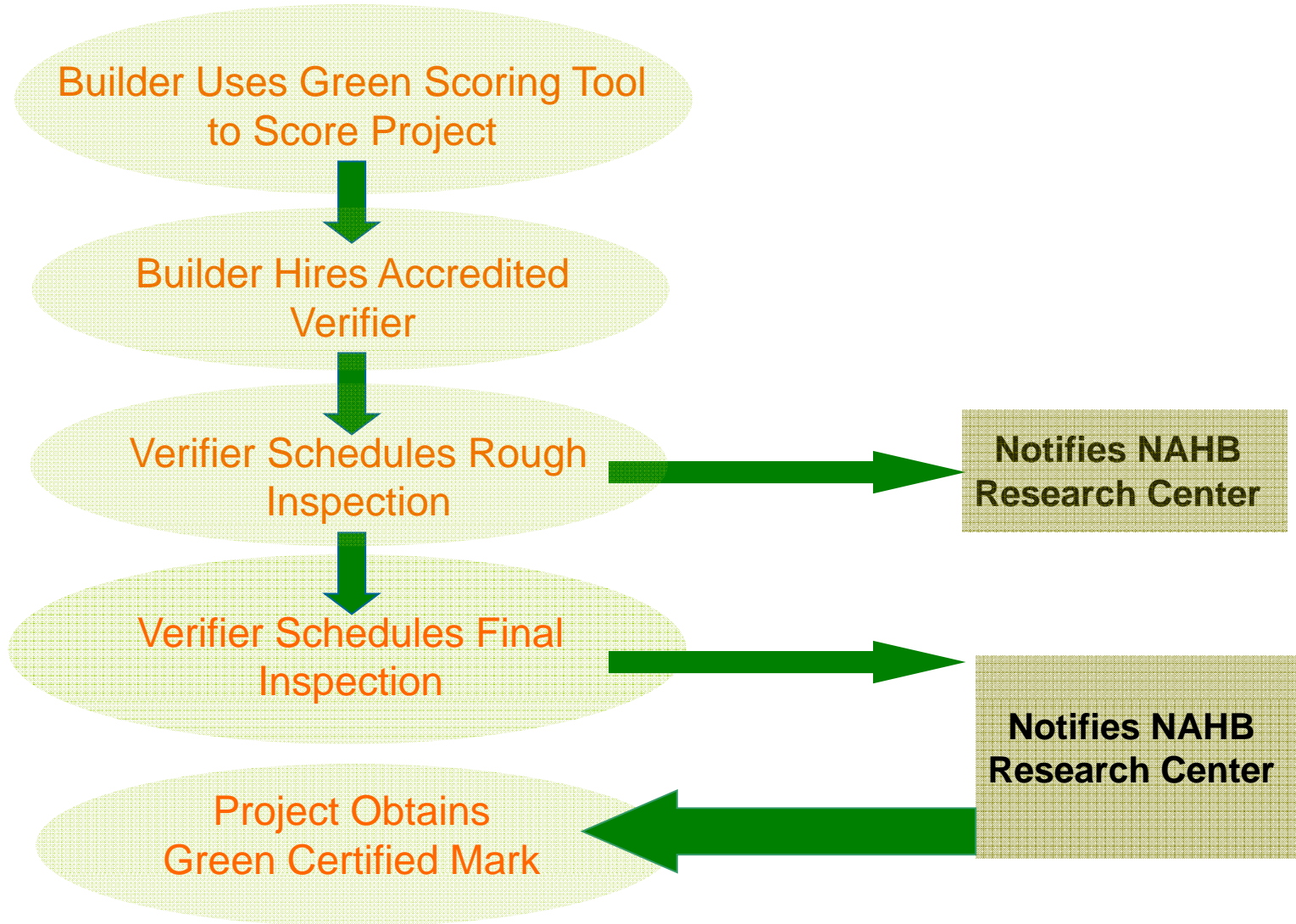
Rating System	Bronze/Certified	Silver	Gold	Emerald/ Platinum
National Green Building Standard	1.1 – 1.7%	2.8 – 3.1%	6.9 – 7.6%	16.3 – 16.9%
LEED-H	3.6 – 5.6%	5.1 – 7.4%	11.2 – 13.5%	17.3 – 22.9%

Note: Both programs are in their formative stage, so costs are likely to change as the programs develop. Base House is minimum code. Dallas production house cost of \$172,700 is represented.

Certification to the Standard



Project Certification Process



Third-Party Verification



DOE Builders Challenge

- Program Goal
 - Cost-neutral Net-Zero Energy Home
 - Anywhere in US by 2030
- 220,000 high performance homes by 2012
 - 70 threshold on E-Scale
 - Meet Builders Challenge Quality Criteria
- Incremental increases to 2030
- Seamlessly integrated with National Green Building Certification
 - Green Scoring Tool
 - Dual Certification





About NAHB Green

Who is Green?

Green Scoring Tool

Rating Systems

Certification

Education

: Home : Green Scoring Tool

Greening the American Dream

NAHB Green Scoring Tool

Quick Links

[CGP - Certified Green Professional Designation](#)[Become a Verifier](#)[Home Certification](#)[Find a Local Program](#)[Find a Verifier](#)

SIGN IN

You are currently signed in to the NAHB Green Scoring Tool.

[View My Projects](#)[Sign out](#)

DOWNLOAD

[NAHB Model Green Home Building Guidelines](#)[Verifier's Resource Guide](#)

Section Total:

37

37 82 100+

Bronze Silver Gold

Ready to build green? Score your home design using this interactive tool based on the *NAHB Model Green Home Building Guidelines*.

The NAHB Green Scoring Tool is useful to skilled professionals as well as novices, providing information about the why and how of green building at every step.



Get Started!

Sign in or register using the box to the left to begin scoring your green home.

Ready to go green? [Register](#) or sign in to determine how many points your project would earn using the *NAHB Model Green Home Building Guidelines*.

The Green Scoring Tool uses the *NAHB Model Green Home Building Guidelines* as its basis. Additional tools are currently under development to be released when the National Green Building Standard is officially available to the public.

Consumers can develop ideas to discuss with their builders or remodelers. Builders or remodelers can develop green home designs to discuss with their trades or customers, and if they are intending to get the homes certified, they can develop their designs to

It doesn't really cost more to build green. It's not a matter of what materials you use, it's how you use them. Green building is about best practices.

Jeff Junkert, Jeff Junkert Construction, Billings, MT



Online Green Project Management

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Green Scoring Tool for the National Green Building Standard

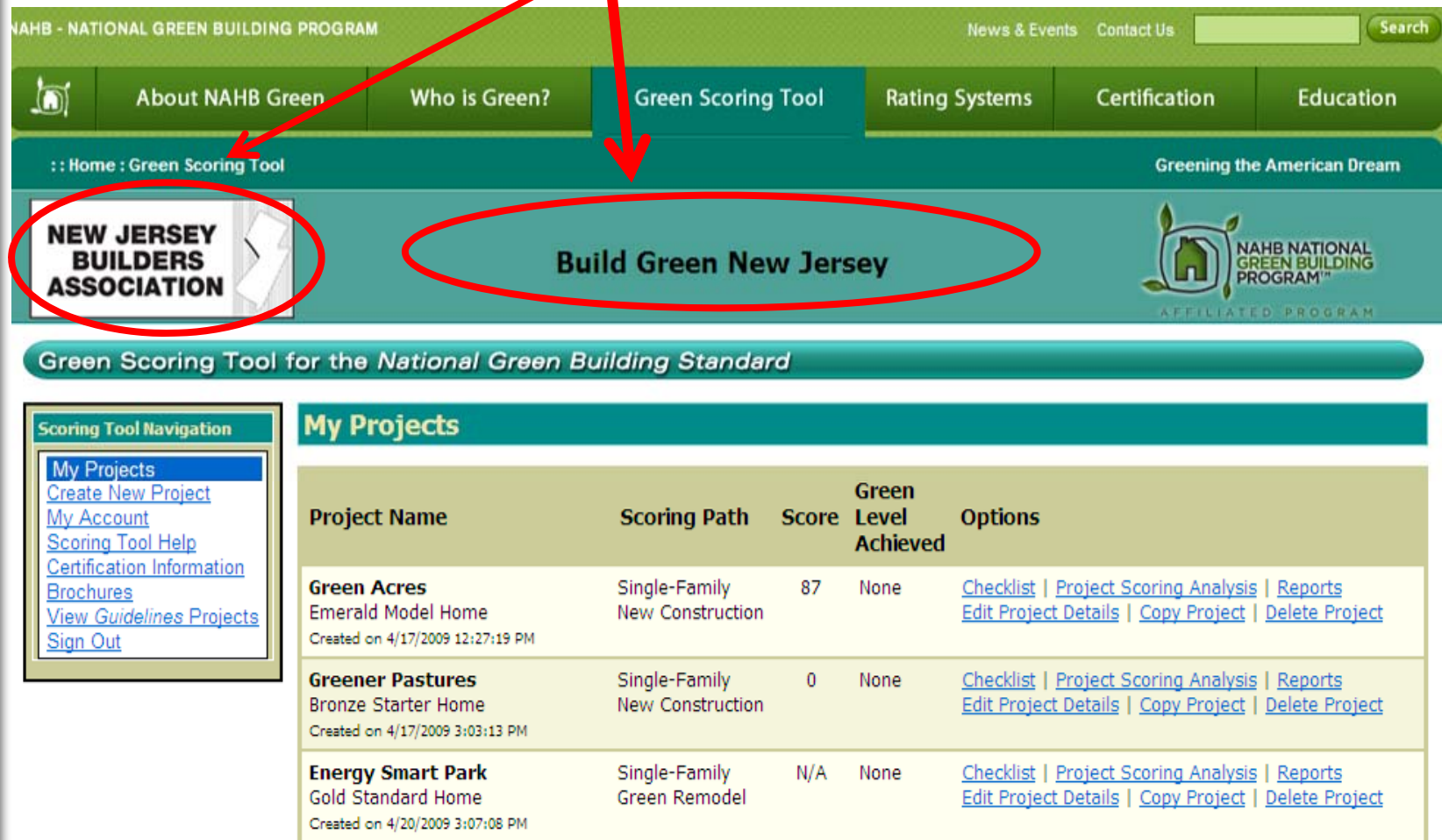
Scoring Tool Navigation

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My Projects

Project Name	Scoring Path	Score	Green Level Achieved	Options
Green Acres Emerald Model Home <small>Created on 4/17/2009 12:27:19 PM</small>	Single-Family New Construction	0	None	Checklist Project Scoring Analysis Reports Edit Project Details Copy Project Delete Project
Greener Pastures Bronze Starter Home <small>Created on 4/17/2009 3:03:13 PM</small>	Single-Family New Construction	0	None	Checklist Project Scoring Analysis Reports Edit Project Details Copy Project Delete Project
Energy Smart Park Gold Standard Home <small>Created on 4/20/2009 3:07:08 PM</small>	Single-Family Green Remodel	N/A	None	Checklist Project Scoring Analysis Reports Edit Project Details Copy Project Delete Project

HBA Branding



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NEW JERSEY BUILDERS ASSOCIATION

Build Green New Jersey

NAHB NATIONAL GREEN BUILDING PROGRAM™ AFFILIATED PROGRAM

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My Projects

Project Name	Scoring Path	Score	Green Level Achieved	Options
Green Acres Emerald Model Home Created on 4/17/2009 12:27:19 PM	Single-Family New Construction	87	None	Checklist Project Scoring Analysis Reports Edit Project Details Copy Project Delete Project
Greener Pastures Bronze Starter Home Created on 4/17/2009 3:03:13 PM	Single-Family New Construction	0	None	Checklist Project Scoring Analysis Reports Edit Project Details Copy Project Delete Project
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Scoring Tool Checklist

- [Reports](#)
- [Project Scoring Analysis](#)
- [Builders Challenge 60](#)

Hide Chapter Navigation

- Chapter 5 - Lot Design, Preparation, and Development
- Chapter 6 - Resource Efficiency
- Chapter 7 - Energy

Scoring Tool Checklist

Project Name: Green Acres
Project Description: Emerald Model Home
Scoring Path: Single-Family New Construction
Green Level Achieved: None

This project is 1234 square feet, requiring 50 additional points for Bronze and 100 additional points for Silver, Gold, and Emerald.

Chapter 8, Step 14 of 14

Summary of Chapter 8: Water Efficiency

Below is a summary of the points available and your points claimed for each line item in Chapter 8: Water Efficiency.

Depending upon a variety of project specific factors, it may not be possible to claim all of the points indicated.

Ⓜ This practice may be mandatory depending upon location and specifics of the design.

Practice Number	Practice Name	Maximum Points Available	Points Claimed	*Mandatory Item Status
<div> <div>Project Status</div> <div> Chapter 8 Score: <input type="text" value="4"/> How do I reach a green level? </div> <div> Chapter Minimums: <div> <div>14</div> <div>26</div> <div>41</div> <div>60</div> </div> </div> </div>				

[Mandatory Status](#)

[Don't forget your Additional Points!](#)

[Chapter Summary](#) | [Project Scoring Analysis](#) | [Project Reports](#)

Project Dashboard
 National Green Building Certification

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Scoring Requirements Tally

! Please read carefully

Additional Points

According to 601.1 of the National Green Building Standard, a dwelling greater than 4,000 square feet will require an increase in the additional points needed to reach a particular level (1 point per every 100 square feet over 4,000).

For this project:

Square Footage = 1234

Additional Points needed for Bronze = 50

Additional Points need for Silver, Gold, or Emerald = 100

Energy Efficiency Path

Path chosen = Performance Path

Because this project follows the Performance Path, it is eligible to attain the Emerald

The Project Scoring Analysis provides an overview of the points achieved for your project, and allows you to see what points are necessary to reach each level of green building.

Hide Bronze Scoring Analysis

Chapter	Required Points	Claimed Points	Additional Claimed Points Above Bronze	Point Shortfall	Mandatory Status
Chapter 5: Lot Design, Preparation, and Development	39	58	19		Not Applicable
Chapter 6: Resource Efficiency	45	25		20	Not Met
Chapter 7: Energy Efficiency	30	60	30		Not Met
Chapter 8: Water Efficiency	14	4		10	Not Applicable
Chapter 9: Indoor Environmental Quality	36	53	17		Not Met
Chapter 10: Operation, Maintenance, and Building Owner Education	8	3		5	Met
SECTION TOTALS	172	203	66	35	
Additional Points Above Bronze	50	--	66	0	
TOTAL POINTS	222	203	--	35	

To achieve Bronze:

- Reach required Bronze score for each chapter
- Reach required Additional Points for this project
- Meet all mandatory items



Local Green Building Programs

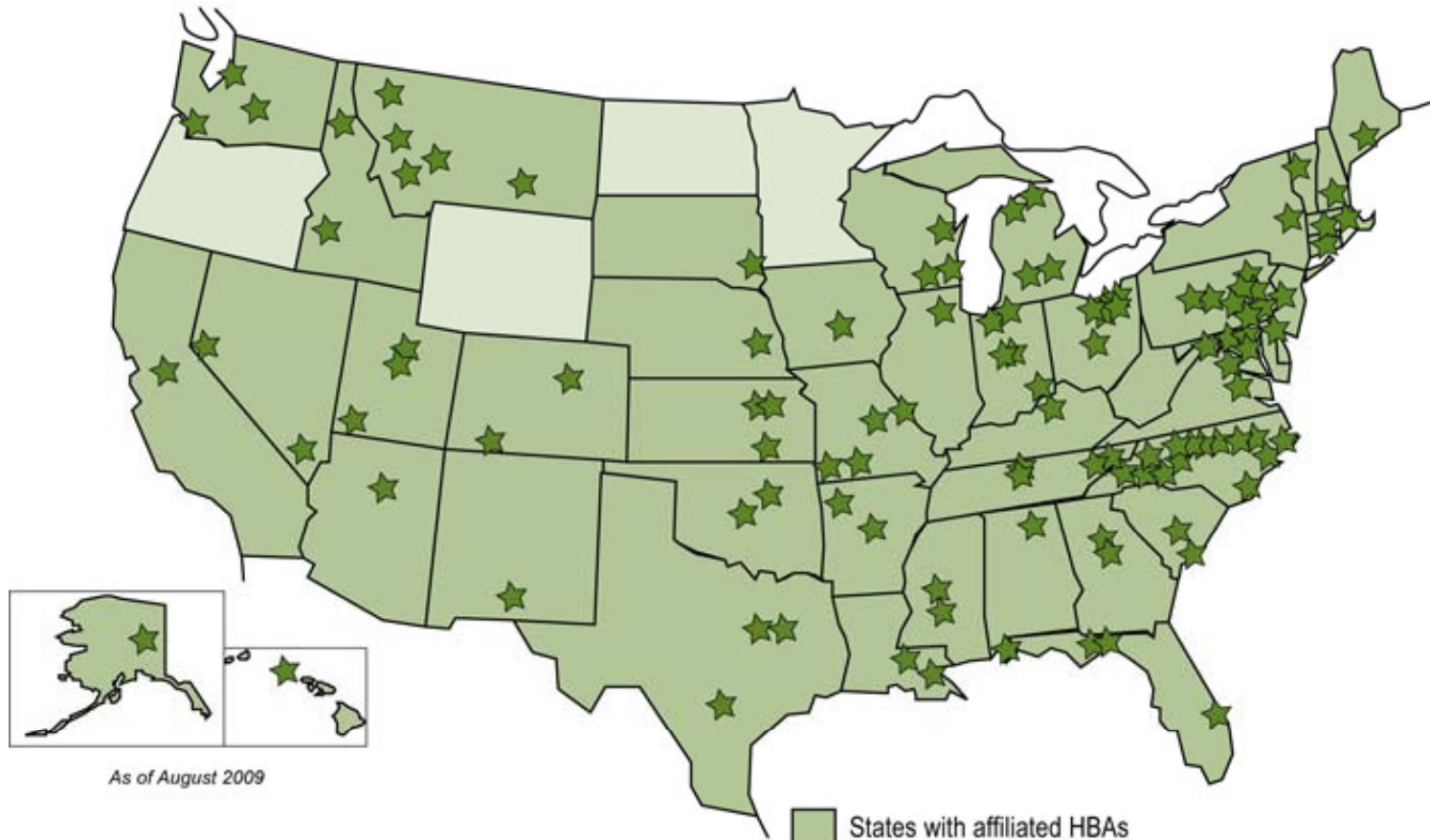
Build Green NJ



National Green Building Certification



NAHBGreen Affiliated HBAs

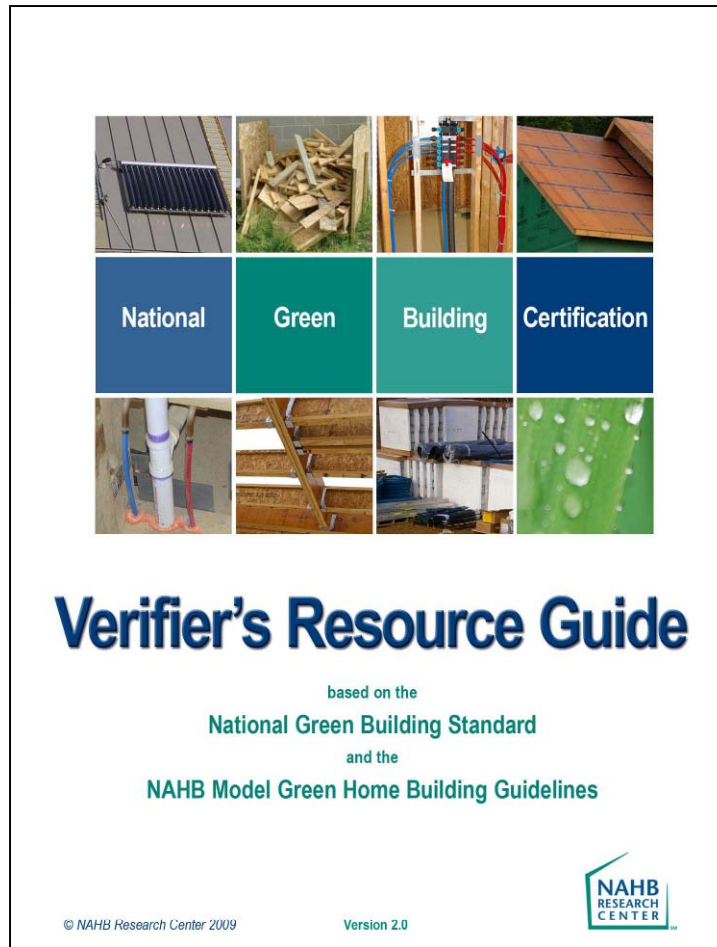


To affiliate your local effort contact Kevin Morrow, Green Standards Program Manager at NAHB, 202-266-8375.



National Green Building Certification

Accredited Verifier Resources



- Verifier's Resource Guide
 - For accredited verifiers only
 - Provides guidance
 - Updated regularly
- Verifier Update
 - Bi-weekly
 - Insiders Tips
 - Green Scoring Tool
 - FAQs

Green Approved Products

- Pre-approved points for products
 - Third-party verification/confirmation required
- Assists builders in making product choices
 - Approved products listed in Green Scoring Tool
 - Simplifies specifications and field inspections
 - Provides simple and seamless process for builders to select products that contribute to a building being green

Green Approved Products Integrated into Green Scoring Tool

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[Reports](#)
[Project Scoring Analysis](#)

Hide Chapter Navigation

- Chapter 5 - Lot Design, Preparation, and Development
- Chapter 6 - Resource Efficiency
 - Chapter 6 Introduction
 - 601 Quality of Construction Materials and Waste
 - 601.1 Conditioned floor area
 - 601.2 Material usage
 - 601.3 Building dimensions and layouts
 - 601.4 Framing and structural plans
 - 601.5 Prefabricated components
 - 601.6 Stacked stories
 - 601.7 Site applied finishing materials**
 - 601.8 Foundations
 - 601.9 Above grade wall systems
 - 602 Enhanced Durability and Reduced Maintenance
 - 603 Reused or Salvaged Materials
 - 604 Recycled-Content Building Materials
 - 605 Recycled Construction Waste

Chapter 6: Resource Efficiency

Section 601 Quality of Construction Materials and Waste

Design and construction practices that minimize the environmental impact of the building materials are incorporated, environmentally efficient building systems and materials are incorporated, and waste generated during construction is reduced.

601.7 Site applied finishing materials

601.7 Building materials or assemblies are utilized that do not require additional site applied material for finishing. These include:

- a. pigmented, stamped, decorative, or final finish concrete or masonry
- b. trim not requiring paint or stain
- c. window, skylight, and door assemblies not requiring paint or stain on exterior and/or interior surfaces
- d. wall coverings or systems not requiring paint or stain or other type of finishing application

For example: of all of the exterior trim, less than 10% needs to be painted.

12 points maximum awarded

	Points per Material	Number of Materials
Enter number of types of materials or assemblies where at least 90% are pre-finished	5	<input type="text" value="0"/>
Enter number of types of materials or assemblies where at least 50% are pre-finished	2	<input type="text" value="0"/>

Points Recorded: 0 [Calculate Points](#)

[How to Verify](#) | [Intent](#) | [How to Implement](#) | [Resources](#) | [Green Approved Products](#)

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Chapter Status **Project Status**

Chapter 6 Score: [How do I reach a green level?](#)

Chapter Minimums: **45** **79** **113** **146**

[Mandatory Status: !](#)

[Don't forget your Additional Points!](#)

[Chapter Summary](#) | [Project Scoring Analysis](#) | [Project Reports](#)

Internet 100%

www.GreenApprovedProducts.com

The screenshot shows the homepage of the Green Approved Products website. At the top left is the NAHB Research Center Green Approved logo. The main header reads "GREEN APPROVED PRODUCTS for the National Green Building Standard™". Below this is a navigation bar with links: Home, Find Products, Find Manufacturers, Get Listed, Green Scoring Tool, About Us, and Contact Us. The main content area features the tagline "Certifying green homes just got one step easier" and three columns of information for Manufacturers, Builders & Designers, and Verifiers. At the bottom, there are two banners: "Order the National Green Building Standard" (with a book cover image) and "Score Your Green Project" (with a house image showing a score of 37).

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for the **National Green Building Standard™**

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Certifying green homes just got one step easier

Manufacturers: Get Your Products Green Approved

Make sure your products are in front of builders serious about National Green Building Certification - [get your products Green Approved](#) today.

Builders & Designers: Specify Green Approved Products

Don't wonder if your verifier will agree that you should get the points you're claiming - know it. [Specify Green Approved products](#) in your next project.

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Understand what products are Green Approved to streamline the verification process. Encourage your builder clients to [use Green Approved products](#) to save your time and theirs.

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Score Your Green Project

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Find Products

Look for products approved to earn points toward [National Green Building Certification](#). You can view all products, sort by product type, or sort by practices listed in the [National Green Building Standard™](#).

☒ List All ☐ Browse by Product Type ☐ Browse by Green Practices

iLevel by Weyerhaeuser
▲ Hide 8 product(s) approved for this manufacturer

Product Name	Maximum Possible Points for the Standard
Weyerhaeuser Lumber, iLevel Framed Series Lumber	4 - 10
iLevel Javelin, iLevel TJ-Xpert	4
iLevel Trus Joist TJI Joist, iLevel Trus Joist TJO Joist	3 - 17
iLevel Trus Joist StrandGuard TimberStrand LSL	3 - 22
iLevel Shear Brace	3 - 16
iLevel Edge, iLevel Edge Gold, iLevel Radiant Barrier Sheathing, Weyerhaeuser Sheathing	0 - 24
iLevel Trus Joist TimberStrand LSL, iLevel Trus Joist Parallam PSL, iLevel Trus Joist Microllam LVL	3 - 16
iLevel NextPhase Site Solutions	4

ODL, Inc.
☑ Show 1 product(s) approved for this manufacturer

Rainwater Collection Solutions Inc
☑ Show 1 product(s) approved for this manufacturer

Owens Corning

NAHB Research Center



National Green Building Certification

NAHB Research Center Background

- Mission to improve the durability, affordability, and environmental performance of housing
- Founded in 1964 as for-profit, independent subsidiary of National Association of Home Builders
- Core Competencies
 - Market Research
 - Third-party accredited Lab Testing & Certification
 - Field Evaluations & Demonstrations
 - Code Compliance
 - Information Dissemination



NAHB Research Center Green Home Certification

- Sole certifying body for NAHB National Green Building Program (NAHB Green)
- Train and accredit verifiers
- Provide national oversight and interpretation
 - Ensure accuracy and consistency
 - Provides technical assistance
 - Review and approve all verification reports
 - Toll-free Hotline for questions and interpretations
- Issue Green Certified mark



**LOOK FOR THIS MARK.
IT'S PROOF THAT
YOUR HOME IS GREEN!**



National Green Building Certification



Michael Luzier

President

NAHB Research Center

400 Prince George's Blvd. ♦ Upper Marlboro, MD 20774
301-430-6200 ♦ (toll-free) 800-638-8556

mluzier@nahbrc.com

www.nahbrc.com

www.NAHBGreen.org



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